

## CLAIMS

1) A rotary unit (5), of an FFS (Form, Fill and Seal) machine (1), for ultrasound sealing a continuous tubular strip (2) housing an orderly succession of products (3) and fed along a feed path (P) extending through a sealing station (4); the rotary unit (5) being characterized by comprising two rotors (9) located on opposite sides of the feed path (P), and which rotate in opposite directions about respective axes (10) of rotation, and have respective pitch surfaces (11) tangent to each other and to the feed path (P); an ultrasound sealing head (15), forming part of one of the two rotors (9), cooperates at the sealing station (4) with a corresponding anvil (25) forming part of the other rotor (9), to close the tubular strip (2) along a transverse seal line (6) located at a respective portion (7) of the tubular strip (2) extending between two respective adjacent products (3); and the sealing head (15) comprising a respective actuating device (17) coaxial with an axis (16) of the sealing head.

2) A unit as claimed in Claim 1, wherein each said rotor (9) comprises a given number of sealing heads (15) and an equal number of anvils (25); the two rotors (9) are identical; each sealing head (15) having a respective sealing surface (21); each anvil (25) having a respective contrast surface (26); and said sealing surface (21) and said contrast surface (26) defining respective portions

of the pitch surface (11) of the respective rotor (9).

3) A unit as claimed in Claim 2, wherein said sealing surfaces (21) and said contrast surfaces (26) of each rotor (9) alternate along the pitch surface (11) of the respective rotor (9) and about the respective said axis (10) of rotation.

4) A unit as claimed in Claim 3, wherein each sealing surface (21) of each rotor (9) defines, with each adjacent contrast surface (26) and along the respective pitch surface (11), an arc extending about the respective axis (10) of rotation and subtended by a central angle which is constant for each pair of adjacent sealing (21) and contrast (26) surfaces.

5) A unit as claimed in Claim 4, wherein the two rotors (9) are offset angularly by said central angle.

6) A unit as claimed in one of Claims 1 to 5, wherein each said rotor (9) comprises only one sealing head (15) having a respective sealing surface (21); and only one anvil (25) having a respective contrast surface (26); said sealing surface (21) and said contrast surface (26) being diametrically opposite along the pitch surface (11) of the respective rotor (9).

7) A unit as claimed in Claim 6, wherein said sealing head (15) has a longitudinal axis (16) perpendicular to the relative axis (10) of rotation.

8) A unit as claimed in one of Claims 1 to 5, wherein each said rotor (9) comprises two anvils (25) having respective contrast surfaces (26); and two sealing

heads (15) having respective longitudinal axes (16) parallel to each other, crosswise to the relative axis (10) of rotation, and located on opposite sides of the axis (10) of rotation; said two sealing heads (15) having  
5 respective sealing surfaces (21) diametrically opposite along the pitch surface (11) of the relative rotor (9) and lying in a first diametrical plane (P1); and said two contrast surfaces (26) being diametrically opposite along the pitch surface (11) of the relative rotor (9) and  
10 lying in a second diametrical plane (P2) perpendicular to the first diametrical plane (P1).

9) A unit as claimed in any one of the foregoing Claims, wherein each anvil has a blade (28) which cooperates, at said sealing station (4), with the  
15 corresponding sealing head to cut the tubular strip (2) along the relative seal line (6).